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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,100	02/26/2002	Takahiko Mibu	027260-519	3984

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EXAMINER

BELLO, AGUSTIN

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,100

Applicant(s)

MIBU, TAKAHIKO

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/8/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art cited by the applicant (Figure 4) in view of Okubo (U.S. Patent No. 5,689,355).

Regarding claim 1, the prior art cited by the applicant teaches an optical signal transmitting unit (reference numeral 5 in Figure 4) for converting the transmission data into an optical signal so as to send the optical signal into said optical cable (reference numeral 1a in Figure 4); an optical signal receiving unit (reference numeral 6 in Figure 4) for extracting data from an optical signal received by way of said other optical cable (reference numeral 1b in Figure 4); a monitoring unit (reference numeral 13 in Figure 4) for monitoring a transmitting state in which said optical signal transmitting unit is placed and a receiving state in which said optical signal receiving unit is placed so as to generate a monitor signal. The prior art cited by the applicant differs from the claimed invention in that it fails to specifically teach a radio signal input unit for extracting transmission data from a radio signal applied thereto from outside said optical transmitter and receiver; a multiplexer for multiplexing the data output from said optical signal receiving unit and the monitor signal output from said monitoring unit into reception information; and a radio signal output unit for converting the reception information output from said multiplexer into a radio signal and for outputting the radio signal to outside said optical

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transmitter and receiver. However, Okubo, in the same field of transceivers, teaches it is well known in the art to incorporate such elements in a transceiver unit. For example, Okubo teaches a radio signal input unit (reference numeral 31 in Figure 1) for extracting transmission data from a radio signal applied thereto from outside said optical transmitter and receiver; a multiplexer (reference numeral 40 in Figure 1) for multiplexing the data output from said optical signal receiving unit and the monitor signal output from said monitoring unit into reception information; and a radio signal output unit (reference numeral 31 in Figure 1) for converting the reception information output from said multiplexer into a radio signal and for outputting the radio signal to outside said optical transmitter and receiver. One skilled in the art would have been motivated to include the elements taught by Okubo in the device of the cited prior art in order to compensate for silent zones in communication systems (column 1 lines 6-11 of Okubo). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include the elements disclosed by Okubo in the device of the cited prior art.

Regarding claim 2, the combination of references teaches that said radio signal input unit includes an antenna (e.g. part of reference numeral 31 in Figure 1 of Okubo) for receiving a radio signal applied thereto from outside said optical transmitter and receiver, a demodulation unit (reference numeral 31, 32 in Figure 1 of Okubo) for demodulating the received radio signal so as generate transmission information, and a separation unit (reference numeral 33 in Figure 1 of Okubo) for separating the transmission information into transmission data, which is to be converted into an optical signal by said optical signal transmitting unit (reference numeral 5 in Figure 4 of the prior art cited by the applicant), and a transmission control signal (e.g. output of

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reference numeral 10 in Figure 4 of the cited prior art) used for controlling said optical signal transmitting unit.

Regarding claim 3, the combination of references teaches said radio signal output unit includes a modulation unit (reference numeral 31 in Figure 1 of Okubo) for modulating a carrier wave with the reception information output from said multiplexer so as to generate a radio signal, and an antenna (e.g. triangular part of reference numeral 31 in Figure 1 of Okubo) for transmitting the radio signal output from said modulation unit to outside said optical transmitter and receiver.

Regarding claim 4, the combination of references teaches a storage unit (as described by the applicant in Specification pages 3 and 4) for storing results of a test and an adjustment which are carried out on said optical transmitter and receiver, wherein said multiplexer (reference numeral 40 in Figure 1 of Okubo) multiplexes the data output from said optical signal receiving unit, the monitor signal output from said monitoring unit (reference numeral 13 in Figure 1 of the cited prior art) and the test and adjustment results into the reception information.

3. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art cited by the applicant (Figure 4) in view of Okubo and Matsubara (U.S. Patent No. 6,355,812).

Regarding claims 5, 6, 9, and 10, the combination of references differs from the claimed invention in that it fails to specifically teach an identification information storage unit for storing identification information used for identifying said optical transmitter and receiver, and an identity detection unit for comparing identification information included in the transmission information with the identification information stored in said identification information storage unit, and for delivering the transmission information to said separation unit when the

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identification information included in the transmission information matches the identification information stored in said identification storage unit. However, Matsubara, in the same field of wireless communication teaches an identification information storage unit (reference numeral 116 in Figure 6) for storing identification information used for identifying said optical transmitter and receiver, and an identity detection unit (reference numeral 117 in Figure 6) for comparing identification information included in the transmission information with the identification information stored in said identification information storage unit, and for delivering the transmission information to said separation unit when the identification information included in the transmission information matches the identification information stored in said identification storage unit (column 2 lines 28-34). One skilled in the art would have been motivated to include the elements taught by Matsubara in the device of the combination of references in order to discriminate between the terminals in the network (column 2 lines 16-20 of Matsubara).

Regarding claim 7, the combination of references teaches a spatial optical signal input unit (reference numeral 113 in Figure 6 of Matsubara) for receiving a spatial optical signal emitted in an outside space, and for converting the spatial optical signal into transmission information; a separation unit (reference numeral 33 in Figure 1 of Okubo) for separating the transmission information output from said spatial optical signal input unit into transmission data and a transmission control signal; an optical signal transmitting unit (reference numeral 5 in Figure 4 of the cited prior art) for converting the transmission data into an optical signal according to the transmission control signal and for sending the optical signal into said optical cable; an optical signal receiving unit (reference numeral 6 in Figure 4 of the cited prior art) for

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converting an optical signal received by way of said other optical cable into data; a monitoring unit (reference numeral 13 in Figure 4 of the cited prior art) for monitoring a transmitting state in which said optical signal transmitting unit is placed and a receiving state in which said optical signal receiving unit is placed so as to generate a monitor signal, a multiplexer (reference numeral 40 in Figure 1 in Okubo) for multiplexing the data output from said optical signal receiving unit and the monitor signal output from said monitoring unit into reception information; and a spatial optical signal output unit (reference numeral 112 in Figure 6 of Matsubara) for converting the reception information output from said multiplexer into spatial optical signal and for emitting the spatial optical signal in the outside space. As noted in the rejection of claim 1, the prior art cited by the applicant and Okubo meet the limitations of the claimed invention with the exception of the spatial optical signal inputs/outputs. However, Matsubara clearly teaches that these limitations are well known in the art. One skilled in the art would have been motivated to employ them as taught by Matsubara in order to allow communication with a diverse group of wireless stations. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ spatial optical signal inputs/outputs in the system of the combination of the prior art cited by the applicant and Okubo.

Regarding claim 8, the combination of references teaches a storage unit (as described by the applicant in Specification pages 3 and 4) for storing results of a test and an adjustment which are carried out on said optical transmitter and receiver, wherein said multiplexer (reference numeral 40 in Figure 1 of Okubo) multiplexes the data output from said optical signal receiving unit, the monitor signal output from said monitoring unit (reference numeral 13 in Figure 1 of the cited prior art) and the test and adjustment results into the reception information.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB


AGUSTIN BELLO
PATENT EXAMINER
2/27/05